

**Subbasin Assessment and Total Maximum Daily
Loads of the North Fork Coeur d'Alene River
(17010301)**

November 1, 2001

Idaho Department of Environmental Quality
Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene ID 83814

Appendix E: Letters of Comment and Letters of Response

Comment Log North Fork CDA River TMDL

Date Received	Name/Address
1/8/01	Carol Staley
1/17/01	Eric Klepfer, Director of Env Affairs The Coeur Mine, 595 Front Ave, POBox I, CDA 83816
1/19/01	William Booth Hecla Mining Co, 6500 Mineral Dr, CDA 83815
1/19/01	Mike Mihelich Kootenai Env Alliance, PO Box 1598, CDA 83816
1/20/01	ASARCO
1/22/01	Dean Johnson IDL, 3780 Industrial Ave S, CDA 83815
1/22/01	Timothy Butler HellerEhrman Attorneys, 701 Fifth Ave, Ste 6100, Seattle, WA 98104 (sent 3 faxed copies, original received 1/24/01, attached to copies)
1/22/01	Kathy Zanetti SNRC, PO Box 1027, Wallace 83873
1/22/01	John Osborn 2421 W Mission Ave, Spokane, WA 99201 (emailed copy, original received same day, attached)
1/22/01	Michael Branstetter PO Box 571, Osburn 83849
1/23/01	Liz Sedler Lands Council, PO Box 1203, Sandpoint 83864
1/29/01	Greg Tourtlotte Idaho Fish & Game, 2750 Kathleen Ave, CDA 83815
2/01/01	Curry Jones EPA, Seattle

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JAN - 8 2001

IDHW-DEQ

Coeur d'Alene Field Office

To the Department of Environmental Quality

Subject matter: North Fork of the Coeur d'Alene River sediment problem.

I am writing regarding the article in the Spokesman Review dated 12-21-00 in which the DEQ claims the sediment problem is caused mainly from the logging roads. Well, from my observation I believe this to be the wrong conclusion. My husband and I have owned a home on the North Fork of the Coeur d'Alene River for twelve years. My observations are constant and personal, for it affects us personally.

When we first bought our home, the river in front of our house ran deep and swift. I loved to listen to the floaters laugh and whoop it up as they passed in front of the house. Now, twelve years later, the river in front of our home runs slow and lazy because it's shallow and by mid-summer most of the riverbed is dried up and out of the water. Now rafters have to pick up their rafts and carry them over the exposed rocks. This isn't a sediment problem exactly but the results of flood damage. Flood damage that increases each and every year. I believe the majority of the sediment in that river (or rather the sediment that's filling the lake bed) is coming from the destruction on the rivers own banks. Every year dozens of trees are undermined and fall into the river leaving the banks more and more unprotected. Tons of dirt and rock are washed down stream. The dirt washes away while the rock just fills up the riverbed leaving it shallower. The shallower it becomes the warmer the water is during the summer months. This, I'm positive, has more impact on the trout population than sediment from the logging roads. My mother and father live on Beaver Creek and every year they and their neighbors lose more and more land to the flooding of Beaver creek. The creek is eating away the banks leaving nothing but exposed rock. I believe this to be the results of over logging and clear cutting. With all the bare hillsides, there is nothing to stop or slow the runoff when a warm spell hits. The river can handle torrential rains for days but not during runoff. Clear cutting has impaired its ability to handle even the mildest of runoff due to a warming trend.

With every year the population along the river grows. People wanting to live on the river clear large sections of land of all its bushes and trees so it can be used for grazing horses and park like settings for camping. The grazing horses cause damage to the banks and increases the bank erosion during flooding. The clearing of vegetation along the banks, increase the risk of the banks washing away. One family with a large park like yard, even hauls in sand for its river bank so they have a sandy bank to play on. After the spring flood, someone else will have their sand and they will have to haul more for their bank.

I have seen this river during its peak flooding and yes it runs muddy. But oddly enough the small streams flowing into the river are running high and wild but mostly clear. Wouldn't the small streams that have adjacent logging roads, be the major contributor to the muddy water if the logging roads were in fact the major cause of the sediment.

Sometimes I truly have to wonder about government projects aimed at helping to improve trout runs. Several years ago Steamboat Creek was being "improved" with timber being piled across the streambeds to form deep pools for the fish. The timber was not secured with **anything**, just thrown across the creek. Well to no ones surprise, come spring and the water began to rise, the logs began to float down stream. They collected in major logjams that would continue to break free and float on down stream. Every log

took out bushes, grass and even standing trees along the creek. The destruction caused by the "half assed government fix" was unbelievable. The road was closed half the summer due to washout, and the bridge was washed out. There would have been damage along that creek even without the logjams, but the "fix" was not thought out and truly caused a lot of damaged that resulted in major bucks to repair. Not to mention a little extra sediment. Beware of quick fixes.

A major contributor to the sediment problem during the warmer months is the traffic on the unpaved roads next to the river. These are not logging roads but the main access river roads. Twelve years ago the Old River Road was paved the entire length. It wasn't a pretty road but it was still paved. After the roads were tore up to install new phone cables, most of the road was not repaved. The traffic on that short section of the river alone contributes an unbelievable amount of sediment into the river. While rafting the river one has an up close and personal view of the river bottom. There is a shocking difference in the sections that are paved and unpaved. The paved sections are clear and the rocks are clean along the bottom of the river, where as the unpaved sections are coated with a thick layer of sediment on the rocks and everything in the water.

Another major contributor to the sediment problem (and this just a recent occurrence but not one that promises to go away soon) is the mining of topsoil along the river. The dirt coating the river bottom adjacent to the top soil extraction process, and everything down stream from that point is unbelievable. If landowners are going to profit from selling their soil, then they should be held accountable for the damage to the rivers polluted because of it.

I'm not saying logging roads don't contribute to the problem, for I'm sure they do, but other, more serious problems should be looked into before the blame is placed. If the degradation of that river continues at the same rate it has in the last twelve years, there will be no way the trout will survive.

Thanks for listening to my opinion,

Carol Staley

May 23, 2001

Carol Staley
13421 N. Ferndale Drive
Hayden ID 83835

Dear Ms. Staley:

Thank you for the comment provided by you on the North Fork Coeur d'Alene River Sub-basin Assessment and Total Maximum Daily Loads (TMDLs). A considerable amount of comment was received on these documents. Comments raising legal issues comprised some of this comment. Response to the comment and revision of the Sub-basin Assessment (SBA) and the TMDLs has taken some time since the close of comment on January 22, 2001.

The comments made by you as we understood them and our responses follow. If a revision was made to the documents this is noted. A responsiveness summary of all the comment will be submitted with the assessment and TMDLs. If you wish to review the comments of others and our response and actions taken, this document should be consulted.

Comment 1: It is clear cutting that has affected the river causing bank erosion from the peak flows.

Response 1: The flood frequency of the North Fork is analyzed on page 11 of the Sub-basin Assessment. The analysis examines the peak discharge events over the past sixty-two years. It finds that the 1974 and 1996 high discharge events are the largest of record. The 1933 event is thought to be the largest flood of historic times based on photographic evidence. The 1974 and 1996 events are listed in their order of size. The history of logging is clear that clear-cuts began in the forty's and fifty's and intensified through the 1960's and 1970's and decelerated into the 1980's. The flood history does not support the argument that clear-cutting has caused greater flood discharges.

The riverbed has filled with cobble materials. This phenomena is related to erosion rates. The presence of this material in the channel has caused discharges of lower amounts to result in more over bank flooding, causing the impression that higher discharges have occurred with the proliferation of clear-cutting.

The sub-basin assessment was strengthened on page 11 to better describe the flooding affect.

Comment 2: Clearing of vegetation in the river valley and alterations to the banks (sand beach) is causing sedimentation.

Response 2: Clearing and harvest of riparian vegetation along the river has depleted the amount of large organic debris (LOD)(tree trucks and stumps) in the river. These materials have been demonstrated in recent years to be beneficial in sediment storage and habitat creation in the river. Most bank alterations of which we are aware have armored the banks with large rock. Sediment input from eroding banks was inventoried and a model sediment yield from this source developed.

The assessment was strengthened to point out the role of LOD and its depletion from the river. This is a habitat concern which cannot be addressed by the TMDL process.

Comment 3: Small streams run clear while the North Fork runs muddy. Wouldn't the tributaries run muddy if logging roads were the cause?

Carol Staley
May 23, 2001
Page 2.

Response 3: Visual observations of sediment in streams especially by stream color can be misleading. Sediment and especially large sediment particles (gravel and cobble) are transported episodically. Often such episodes are missed. It is a common observation that heavily roaded watersheds as Steamboat Creek evidence a large amount of sediment entrainment during high discharge events.

Comment 4: Forest Service remedial efforts where LOD was added to the stream did not work.

Response 4: DEQ agrees these efforts did not work, because the stream bed of the North Fork and its tributaries are destabilized by the large amount of bed load in-stream and the general lack of very large cedars which likely stabilized the North Fork prior to development.

The SBA was strengthened to explain the LOD interactions.

Comment 5: A major contributor is dust from the adjacent roads.

Response 5: Dust from adjacent roads probably contributes some sediment to the North Fork. Based on an air quality analysis of road dust, the assumption of 100 trips per day over a 120-day season and 18 miles of road adjacent to the river, 32 tons of dust would be generated. If all the generated dust entering the river, 32 tons of sediment would enter the river. Given the very conservative assumptions that would over-estimate the contribution this is only 0.1% of the sediment load modeled for the river.

Comment 6: A recent likely major contributor is soil removal.

Response 6: Soil removal is a concern in the floodplain and especially on slopes above the river (Teacup Ranch). Since most of the removal has to date occurred on relatively flat grounds and has left a residue of large particles, it is not likely to be a large source of sediment. Removal of soils on slopes will be of greater concern.

Thank you for the comments that were developed on the North Fork Coeur d'Alene River Sub-basin Assessment and TMDLs. If you have questions concerning our responses or the actions taken, please contact me at 208-769-1422.

Sincerely,

Geoffrey W. Harvey
Watershed Coordinator

January 16, 2001

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JAN 17 2001
IDHW-DEQ
Coeur d'Alene Field Office



Coeur d'Alene Mines Corporation
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Mr. Geoff Harvey
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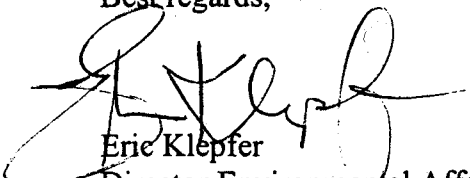
Dear State of Idaho:

Coeur d'Alenes Mines Corporation (Coeur) appreciates the opportunity to comment on the proposed Draft Sub-Basin Assessment and Total Maximum Daily Loads of the North Fork Coeur d'Alene River (North Fork).

These comments specifically pertain to the proposed metals TMDL addressing cadmium, lead and zinc in Beaver, East Fork Eagle and Prichard Creeks. In general, an inadequate amount of data has been collected to properly assess the conditions of the North Fork sub-basins and sources of metals loading therein. Moreover, setting an appropriate TMDL for these watersheds requires more site-specific data collection, sampling frequency and seasonal variation to adequately set metals loading limits.

Coeur respectfully requests that more data be collected to develop an appropriate TMDL plan.

Best regards,


Eric Klepfer
Director Environmental Affairs

COMMENTS TO SUB-BASIN ASSESSMENT AND TOTAL MAXIMUM DAILY LOADS OF THE NORTH FORK COEUR D'ALENE RIVER

Coeur d'Alene Mines Corporation

January 16, 2001

Data limitation

The data used to develop the metals TMDL is very limited and does not adequately represent seasonality, natural metal levels, water quality, flow discharge, and therefore, the calculated metals loading. Specifically, the proposed metals TMDL does not have sufficient scientific information to draw appropriate conclusions and does not allow IDEQ to perform an adequate assessment of stream conditions to assess and develop appropriate TMDLs.

The Kensington Project in southeast Alaska, is a good example of the amount of baseline data that has been necessary from EPA to support issuance of an NPDES permit. It seems reasonable that setting a TMDL should take the same level of technical support required to issue a discharge permit. The Kensington Permit required baseline data including stream flow and quality (10 years of data), metallurgical pilot plant tests (effluent variability – 3 separate pilot plant runs), acid/base accounting and ore characterization (hundred of samples), and humidity cell test.

An alternative plan should be developed that incorporates good science, which includes all information necessary to provide basic information and data necessary to set TMDLs. These local conditions are important to not only establishing TMDLs but also determining whether designated uses are protected and attainable in all reaches of the Basin.

It appears that adits were assessed based on one water quality and discharge sample. While the Gem adit's discharge variability was used to model all other adits, its data is limited to only one year of data collection.

Additionally, only one year of data was collected from Beaver Creek, Prichard Creek and East Fork Eagle Creek to assess stream discharge flow and hardness. In fact, samples were not collected during the months of August and September for the East Fork of Eagle Creek and Beaver Creek. Nor were samples recorded in January for Prichard Creek. More data is needed to develop a proper TMDL plan.

Assessment assumes all dissolved metals introduced by adit drainage are point sources that deliver all of the measured metals load to the adjacent stream without attenuation.

Site specificity and water effects ratios are key elements in determining the attenuation capacity that does occur and should be considered in developing the TMDL. Also, it is overly conservative to assume that all water discharged from adits is delivered directly to the stream system without considering evaporation, plant take-up (evapo-transpiration), material infiltration, attenuation and other conditions that consume water. This is especially true for flows that enter via the alluvium where both quantity and chemical changes can occur improving water quality. Sufficient data should be collected at each site to quantify the true load added to the system. Natural attenuation was not considered, flow estimations are overly conservative, load allocations based on flows doesn't seem equitable or reasonable, non-point source contributions/allocations do not consider site-specific conditions. These areas need to be fully understood prior to setting TMDLs.

Total loading capacity

The assumption that all discharge pathways are delivered to the stream system without some level of attenuation of metal concentration is not scientifically supported. Some consideration should be given to the fact that some flows aren't delivered to the stream-creek and are partially or totally attenuated by soils in the area.

No consideration is given to natural attenuation that occurs in a water system. Sorption of metal ions with organic material, clays, suspended solids and other material that naturally occur in the stream system is not considered. This process reduces the amount of metal bioavailable to the system. Without some consideration to natural attenuation at each target site, complexing of metal ions will not be considered in allocation.

Water quality toxicity testwork that established the Federal Water Quality Criteria were developed using laboratory water. There was no way possible for EPA to develop representative water samples from around the country. Therefore, the tests are very conservative and do not account for natural attenuation. For this reason, using the water quality criteria to establish total loading capacities without consideration to attenuation is overly conservative. This river system, not unlike others, has a considerable amount of natural sediment, which reduces metal bioavailability, which is not being considered in the proposed TMDL. TMDLs should incorporate and/or expand the development of site specific criteria to establish the true total loading capacity for the river system using attenuation. More water quality data for each target site would help establish attenuation, which occurs in the river seasonally.

Higher flow conditions will likely allow higher concentrations because of the increased natural attenuation that is present (higher sediments, organic material etc.). However, the loading capacities do not reflect this condition and only proportion the loading allowed by the increase in flow.

Total loading considerations have been based on theoretical evaluations instead of site specific conditions that exist in the Basin and play an important role in determining appropriate water quality criteria for this stream system. The river water effect on chemistry, attenuation, and toxicity should be used to set appropriate TMDLs.

Antidegradation

Anti-degradation rules do not seem to be applied appropriately. If a reach of a stream is below applicable water quality criteria and enters another stream, which is above applicable water criteria, anti-degradation would only apply to discharges to the stream reach, which is of better quality. Natural background conditions will impact those streams as part of the drainage system. For example, drainages (Lake Creek and Shields Gulch) have been sampled above any historic or present mining activity. Data shows elevated levels of lead and zinc suggesting naturally higher levels of metals are and were present in the stream system. Anti-degradation does not seem applicable because of this natural metal loading, which does occur, would naturally degrade water as it flows down stream. TMDLs should be based on site-specific criteria and conditions not based on inappropriate anti-degradation rules.

Additionally, this background data should not be removed from the allocation but should be used to recognize that higher levels of metals do exist and do not necessarily impact the biological communities.

May 23, 2001

Eric Klepfer
Director of Environmental Affairs
Coeur d'Alene Mines
595 Front Avenue
P.O. Box 1
Coeur d'Alene ID83816-0316

Dear Eric:

Thank you for the comment provided by Coeur d'Alene Mines on the North Fork Coeur d'Alene River Sub-basin Assessment and Total Maximum Daily Loads (TMDLs). A considerable amount of comment was received on these documents. Comments raising legal issues comprised some of this comment. Response to the comment and revision of the Sub-basin Assessment (SBA) and the TMDLs has taken some time since the close of comment on January 22, 2001.

The comments made by Coeur as we understood them and our responses follow. If a revision was made to the documents this is noted. A responsiveness summary of all the comment will be submitted with the assessment and TMDLs. If you wish to review the comments of others and our response and actions taken, this document should be consulted.

Comment 1: The data is inadequate in respect to seasonality. Water quality, flow discharge and therefore calculated metals loadings are inaccurate. Example: EPA required ten (10) years of data for Coeur's Kensington Project in Alaska.

Response 1: The TMDL goals are based on 7Q10, 10th, 50th and 90th percentile flows. These flows are well established from nearby watersheds and the sub-basin assessment (SBA) clarifies how these flows are developed. These flows account for the seasonality of the TMDL goals. The stream discharge data developed by DEQ provides seasonality that mirrors the calculated values. These same data included metals loads measured in-stream. The mine adit data is limited but is from the same database used to develop the Coeur d'Alene Basin Metals TMDL. The Gem adit discharge data is the most extensive mine adit discharge record available. The rule of TMDL development is to use the best available data. The best available data was used to develop the North Fork metals TMDLs.

Comment 2: Data should reflect local conditions; designated uses should be determined attainable.

Response 2: The entire data set used to develop the SBA and TMDLs is a local database, which reflects local conditions. This argument pertains most closely to the Silverton data used to develop the discharge seasonality. The Silverton station is located in the same mountain range, with the same general vegetation and the same climate. It reflects local conditions.

The designated uses for these streams are cold water biota and primary or secondary contact recreation as defined by the Idaho Water Quality Standards and Wastewater Treatment Requirements (IDAPA 58.01.02.101.01.a.) The SBA states these designations.

Coeur d'Alene Mines
May 23, 2001
Page 2

Comment 3: Gem adit discharge data limited to one-year.

Response 3: The Gem Adit data is limited to a single year but it is the best available data for adit discharge (see response to Coeur comment #1).

Comment 4: Data missing for August and September 2000 in Beaver and EF Eagle Creeks and January 2000 in Prichard Creek.

Response 4: The August and September 2000 data is added to the record. These results were not available as the draft SBA and TMDLs were developed, but are now available. The January 2000 Prichard record was not collected by the USGS. This is a data gap that cannot be filled. DEQ continues to monitor Prichard Creek at Murrey and will include these data as they become available.

Comment 5: Assessment assumes all dissolved metals from adits are point sources that are all delivered to the adjacent stream without attenuation.

Response 5: The North Fork metals TMDLs use the same conservative assessment as the Coeur d'Alene Basin Metals TMDL that all metals are delivered to the stream. As these adit discharges are addressed in the implementation of the TMDL plan the opportunity will be afforded to demonstrate and be credited with attenuation.

Comment 6: Attenuation in-stream is not accounted for in the TMDL. Loading capacities at higher flow do not reflect the higher attenuation only the higher flow.

Response 6: Attenuation is accounted for in-stream in this TMDL. The load reductions required at each flow tier is the difference between the calculated TMDL goals based on the discharges and the metals standards and the metals loads measured in-stream by DEQ. The in-stream measurements themselves account for any metals that are attenuated by the stream. Thus in-stream attenuation is accounted for in this TMDL.

Comment 7: Anti-degradation rules are misapplied.

Response 7: Anti-degradation does not apply to impaired waters. It applies only to waters that are below the standards thresholds. The TMDL does not mention anti-degradation nor does it misapply it. For further explanation the Coeur is referred to page 24 of the Coeur d'Alene Basin Metals TMDL.

Thank you for the comments that were developed on the North Fork Coeur d'Alene River Sub-basin Assessment and TMDLs. If you have questions concerning our responses or the actions taken, please contact me at 208-769-1422.

Sincerely,

Geoffrey W. Harvey
Watershed Coordinator



January 19, 2001

TRANSMITTAL VIA HAND DELIVERY

Mr. Geoff Harvey
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DEQ Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene Idaho 83814

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JAN 19 2001

**IDHW-DEQ
Coeur d'Alene Field Office**

RE: Comments – DEQ Proposed TMDLs for Both Sediment and Dissolved Cadmium, Dissolved Lead, and Dissolved Zinc in Selected Surface Waters of the North Fork of the Coeur d'Alene River ("TMDL(s)")

To Whom It May Concern:

Hecla Mining Company hereby submits its comments on the above-referenced TMDLs. Hecla's review of the draft TMDL finds, among others, the following concerns: 1) failure to comply with both federal and state laws and regulations applicable to TMDLs, 2) failure to comply with Idaho regulations pertaining to sediment, 3) failure to fully consider natural background in mineralized areas, 4) use of a highly inappropriate "margin of safety", and 5) use of numerous guidance documents and models, rather than monitoring data, for regulatory purposes. Hecla's specific comments are as follows:

I. EPA/DEQ Failure to Comply With Applicable Federal & State Laws & Regulations

1. Neither of the proposed TMDLs are required under Clean Water Act (CWA) Section 303(d)(1). The proposed TMDLs, if necessary at all, are clearly intended to be TMDLs under CWA Section 303(d)(3).

The Congressional intent of the "list" required at Clean Water Act (CWA) Section 303(d)(1), as supported by the legislative history, is for waters impaired by point sources operating under the technology-based effluent limitations of CWA Sec. 301. The law states:

Each state shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters. (emphasis added)

The CWA defines "effluent limitation" at Sec. 502 as "any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters..."(emphasis added) CWA Sec. 303(d)(1) is clearly the mechanism developed by Congress to recognize those situations where the technology-based limitations of CWA Sections 301(b)(1)(A) & (B) are not stringent enough to meet instream standards, thus the reason Congress did not include the water quality-based point source limitations of CWA Sec. 301(b)(1)(C). This position also appears, on occasion, to be that of EPA's. The following statements are from EPA Federal Register notices:

Section 303(d)(2) requires that states submit and EPA approve or disapprove lists of waters for which existing technology-based pollution controls are not stringent enough to attain or maintain state water quality standards and for which total maximum daily loads (TMDLs) must be prepared. (61 FR 36059)

TMDLs are required in the CWA section 303(d)(1) for waters that will not achieve water quality standards after implementation of technology-based controls. (63 FR 1536)

Section 303(d) of the CWA and its implementing regulations establish the TMDL process to provide a mechanism for allocating more stringent water quality-based requirements when technology-based controls are inadequate to achieve State water quality standards. (63 FR 10799)

Section 303(d)(1) of the CWA requires States to identify and rank water-quality limited waters which will not meet State water quality standards after implementation of technology-based point source controls. (63 FR 63471)

It is clear from the law that Congressional intent under Sec. 303(d)(1) is for a list of waterbodies where point sources operating under technology-based effluent limitation guidelines are both present AND responsible for waters not meeting the "water quality standard applicable to such waters".

The conference report from the legislative history of Sec. 303(d) is also clear that Sec. 303(d)(1) is a list for waters impaired by point sources operating under the technology-based effluent limitations of Sec. 301(b)(1)(A) & (B). The conference report states:

Subsection (d)(1) of section 303 requires each State to identify for the Administrator's approval those waters within its boundaries for which the effluent limitations required for non-publicly owned point sources and for publicly owned treatment works by January 1, 1976, are not stringent enough to implement any water standard applicable to such waters.

CWA Sec. 303(d)(1) is clearly a mechanism where Congress intended a transition from "technology-based" to "water quality-based" effluent limitations, *for point sources*. This

4. There appears to be a false presumption by DEQ for authority under CWA Sec. 303(d) to impose requirements on sources discharging into segments that are not 303(d) listed segments under the proposed TMDL. We can find absolutely no support for this position in either the law or the legislative history. In fact, the plain meaning of the law clearly addresses only "waters identified" (303(d)(1)(C)). If Congress had intended that TMDL restrictions be placed on sources not located on listed segments, the law would read "sources located on any waters within the watershed of the listed segment". This would have been simple for Congress to do if this was to be the intent – it clearly was not. Even EPA, in the Federal Register discussion of "proper technical conditions" discussed in comment 3 above, states "These elements [of proper technical conditions] will vary in their level of sophistication depending on the nature of the pollutant and the characteristics of the segment in question." (emphasis added)

5. The draft TMDL attempts to circumvent the applicable APA requirements by adding both pollutants and stream segments to the TMDL process. For example, Beaver Creek is on the current 303(d) due to "sediment", and not for any identified metal "pollutant". Please be clear at this point that we do not agree with the legitimacy of any existing 303(d)(1) listing due to either sediment or metals. As explained in comments above, such situations are intended to be addressed under other CWA sections. There is absolutely no authority in either federal or Idaho law for DEQ to add both stream segments and pollutants to an existing 303(d) list without complying with the APA.

6. The proposed TMDLs are incomplete, thus do not constitute a TMDL as required by regulation. Federal regulations at 40 CFR 130.2 define "total maximum daily load" as follows:

The sum of the individual WLAs [waste load allocations] for point sources and LAs [load allocations] for nonpoint sources and natural background.

The proposed TMDLs identify neither all point sources nor all nonpoint sources, thus individual allocations for all sources are not made. The draft metals TMDL contains virtually no monitoring data, and certainly insufficient monitoring to reflect seasonal variations as required by law. The regulations do not define a TMDL as "a rough estimate" or "based upon an incomplete data set". Indeed the CWA, at Sec. 303(d)(1)(C), mandates that "Such load shall be established at a level necessary to implement the applicable water quality standards". (emphasis added) Since the law requires a definitive TMDL, and one is not presented in the draft TMDLs, action on the proposed TMDLs must be halted until required data is obtained. Indeed, the TMDLs for listed stream segments and pollutants in the North Fork are not scheduled until 2003, therefore DEQ has adequate time to complete the TMDLs as required by law and regulation. We do not believe, nor is it provided in the law, that either the United States Congress nor the Idaho Legislature intended development and implementation of a costly TMDL first and then worry about the legality and details at a later date.

uses, and water quality criteria for metals. These past comments will not be repeated but are attached and hereby incorporated by reference into these comments as applicable.

IV. The Proposed "Margin of Safety" is Highly Inappropriate

The so-called "margin of safety" in the proposed sediment TMDL is derived from overly conservative models that significantly overestimate what is believed to be a true value. According to the draft TMDL "This over estimation is a built in margin of safety 231% for the North Fork Coeur d'Alene River." Indeed, it appears that the actual margin of safety (MOS) is even higher than 231%. For example:

- Certain erosion events are admitted to occur only during extreme episodic events which occur only once every 10-15 years yet these estimates of eroded weight are "annualized" and attributed to all years even though the erosion does not occur! There are no water quality standards developed specifically for episodic events and these standards are not intended to be applied to such events. If this were not the case, what waters in the entire United States would not have "violated" some standard during an episodic event? Under this disturbed reasoning, shouldn't all waters in the United States be "303(d) listed"? This was not the intent of Congress in developing the CWA and is not the intent of the Idaho Legislature in implementing the CWA.
- The "road encroachment" sedimentation is allotted to roads within 50 feet of a stream regardless of real world conditions (i.e. there may be a 10 mile road stretch which is buffered by natural vegetation and well outside of the normal high water mark, thus adding nothing to the sediment load but guidance/model erroneously assumes in "loads" continually). DEQ only allows a 20% conservative factor for "road encroachment". What is the water quality "science" for the "50 feet" value? According to the draft TMDL, this is "primarily because this is near the resolution of commonly used GIS mapping techniques"!

The CWA is clear on what a MOS is limited to. A MOS is limited to 303(d)(1) TMDLs specifically to address "...any lack of knowledge concerning the relationship between effluent limitations and water quality." (CWA Sec. 303(d)(1)(C)) Here again, 303(d)(1) is clearly intended by Congress to be for point sources and a MOS is not required otherwise. We must point out that DEQ is specifically limited to the authorities of the CWA (IC 39-3601).

It is not clear from the draft TMDL exactly what MOS is applied to the metals TMDL. Hecla specifically addressed the MOS in past comments referenced above (and attached) and incorporate those comments as appropriate.

is why CWA Sec. 303(d)(1) specifically addresses only the "technology-based" effluent limitations of CWA Sec. 301(b)(1)(A) & (B) and not the "water quality-based" effluent limitations of 303(b)(1)(C). This fact is further clarified in the definition of "Wasteload allocation (WLA)" at 40 CFR 130.2(h) where it is clarified that "WLAs constitute a type of water quality-based effluent limitation".

Both the law and legislative history are quite clear that, in order for a water body to be listed under CWA Sec. 303(d)(1), point sources operating under the technology-based effluent limitations must be present and responsible for the water body failing to meet the "applicable standard". Under the misdirected implementation of 303(d)(1) by DEQ, a water segment could be listed here without any point source discharge at all. This incorrect interpretation finds no support at all in either the law or the legislative history.

Congress did not ignore those other situations where point sources operating under "the effluent limitations...are not stringent enough" and are not the source of the problem. Congress specifically addressed such TMDLs at CWA Sec. 303(d)(3) where the law states:

For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load. (emphasis added)

The report from the legislative history describes the 303(d)(3) TMDLs as follows:

A maximum daily load shall also be developed by a State for all waters within its boundaries which are not identified as requiring more stringent effluent limitations to meet water quality standards. The committee recognizes that this is a time-consuming and difficult task. However, if effluent limitations which meet best applicable control technology currently available are to provide a water quality equal to or exceeding water quality standards such maximum daily load limits must be available for correlation.

The proposed TMDLs appear to circumvent Congressional intent by placing virtually all sources into the (d)(1) category rather than utilizing the (d)(3) category. We can speculate on two reasons for this approach: 1) a (d)(3) TMDL does not require federal approval and is for informational purposes only, thus no enforceability, and 2) avoidance of the Congressional intent for the voluntary application of the nonpoint source program of CWA Section 319.

2. Point source "impacts" have not been shown to be the "problem" in either of the proposed TMDLs. The "impacts" alleged for sediment are not based on data, but exclusively on both guidance and models, neither of which have any legal basis.

Due to complete absence of any sources operating under "...the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B)...", these TMDLs clearly belong under CWA Sec. 303(d)(3) and must be addressed at those specific sections of law, as intended by Congress. Indeed, Congress clearly directed both a point source list, at CWA Sec. 303(d)(1), and a nonpoint source list at CWA Sec. 319. The nonpoint source list mandated by Congress is stated at CWA Sec. 319(a)(1) as follows:

The Governor of each State shall, after notice and opportunity for public comment, prepare and submit to the Administrator for approval, a report which (A) identifies those navigable waters within the State which, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain applicable water quality standards or the goals and requirements of this Act....

In addition to the direction of Congress relative to nonpoint sources as mandated at CWA Sec. 319, Congress further addressed the issue of contaminated sediments under the Water Resources Development Act (WRDA) of 1992 (at Title V). Congress specifically spells out EPA's tasks relative to contaminated sediments in WRDA Title V. EPA is to study the problem, report back to Congress on this specific issue, and make recommendations to Congress. Any actions by EPA relative to contaminated sediment must await further authorizing legislation from Congress.

In conclusion, and in concert with the Congressional intent, the appropriate TMDL for the basin, due to the nonpoint source aspects, must be developed under CWA Sec. 303(d)(3); the nonpoint source impaired waters must be identified on the State's 319(a)(1)(A) list; and EPA must await specific authorization from Congress to further address any issues associated with contaminated sediment.

3. Both DEQ and EPA have failed to comply with the CWA mandate of Section 304(a)(2)(D). The law states:

(2) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after the date of enactment of this title (and from time to time thereafter revise) information... (D) for the purpose of section 303, on and the identification of pollutants suitable for maximum daily load measurement correlated with the achievement of water quality objectives. (emphasis added)

The response to compliance with this mandate is that DEQ and EPA believe they have already identified "all" pollutants as suitable for TMDL load measurement based upon some action taken in 1978 and, in EPA's opinion, this constitutes the end of the subject. Based upon the law and the 1978 Federal Register notice on this issue, the identification of pollutants as required by the CWA has not been completed.

First, the law clearly requires routine review of this "identification of pollutants" (i.e. "from time to time revise"). EPA defines "from time to time", for the purpose of 303(d)

listings, to mean "once every two years" (61 FR 36060). We find it difficult to believe that Congress intended this phrase to mean two years for the regulated community and once only for EPA. The fact is that the 1978 "identification" was based upon a very specific list of "pollutants" identified in a draft document published by EPA in October of 1973. Since the 1978 Federal Register notice, EPA has embarked upon rather preposterous assumptions that "pollutants" suitable for both 303(d)(1) listings and TMDL calculations could include such things as habitat, instream flow, atmospheric deposition, and even weather related instream conditions such as ambient water temperature as being "pollutants suitable for maximum daily load measurement correlated with the achievement of water quality objectives". We find absolutely no support for this in either the plain reading of the law or in the legislative history of the CWA.

Based upon the speculative procedure using non-binding guidance and hypothetical models in developing the sediment TMDL (with only a resultant "guesstimate" of a TMDL with an admitted over estimate of 231%! (Appendix B, page 9)), this clearly shows "sediment" is not suitable for establishment of enforceable TMDLs. The rights of the regulated community under both state and federal APA have been ignored by the addition of pollutants NOT "suitable for maximum daily load measurement correlated with the achievement of water quality objectives" without public comment and legal recourse.

Second, TMDL calculations must be limited to "suitable" pollutants identified in the original 1973 list and also as limited in the 1978 Federal Register notice. This key limitation, conveniently ignored by current EPA actions, involves the concept of "proper technical conditions" described at 43 FR 60662 as follows:

the availability of the analytical methods, modeling techniques and data base necessary to develop a technically defensible TMDL.

These "proper technical conditions" are requisite to meet both the "correlated with the achievement of water quality objectives" mandate of CWA Sec. 304(a)(2)(D) and the mandate at CWA Sec. 303(d)(1)(C) that "Such load shall be established at a level necessary to implement the applicable water quality standards". (emphasis added) As previously stated in our comments, the proposed TMDLs belong at 303(d)(3) and not 303(d)(1). The proposed TMDLs clearly fail to meet these requirements.

Third, DEQ cannot bypass the state APA requirements and legislative oversight on any subsequent review of the "identification of pollutants suitable for maximum daily load measurement correlated with the achievement of water quality objectives". The identification of such "pollutants" clearly imposes costly legal obligations on the regulated community of Idaho, thus requiring both APA compliance and legislative oversight. There does not appear to be any evidence of compliance with state APA requirements and subsequent legislative action on EPA's 1978 "identification of pollutants". The state cannot assume some authority to strike a deal with EPA without such APA & legislative oversight.

The statutory requirements of Idaho Code Section 39-3611 also have not been met by DEQ in developing the draft TMDLs. For example, "An analysis of why current control strategies are not effective in assuring full support of designated beneficial uses" has not been accomplished. Had DEQ complied with the regulatory requirements described above at Subsection 350, this aspect would have been addressed.

The proposed TMDL does not constitute a TMDL as required by both law and regulation, therefore we believe the proposed TMDL is illegal and must be set aside.

8. The adoption by Idaho of TMDLs must follow the requirements of the Idaho Administrative Procedures Act for formal rulemaking. A TMDL is an agency action that implements or prescribes law or policy of general applicability.

Certain aspects of the above comments will also be addressed in Hecla's miscellaneous general comments. Based upon the above comments, we believe the proposed TMDL does not comply with applicable law and should be redone in accordance with applicable laws and regulations.

II. Failure to Comply With Idaho Regulations Pertaining to Sediment

The "GENERAL SURFACE WATER QUALITY CRITERIA" for sediment (IDAPA 58.01.02-200.08.) are specific in that "Determinations of impairment shall be based on water quality monitoring and surveillance AND the information utilized as described in Section 350."(emphasis added) As mentioned above, DEQ used guidance and hypothetical models, not the "monitoring and surveillance" and Section 350 information mandated in Idaho regulations, in developing the TMDL for sediment. In fact, DEQ tries to limit the application of Subsection 350 to 350.02.b.(draft TMDL Section 2.2.3, page 9) Hecla's copy of the regulations, as quoted in the first sentence of this paragraph, includes ALL of Subsection 350! This is a very important consideration because DEQ has obviously bypassed the BMP feedback loop provisions at Subsection 350 that are requisite to the determination of a water quality standard violation by nonpoint sources of sediment! Absent this, are these 303(d) "listings" for sediment valid at all? It is important to note that the Court, when establishing both the list of 962 streams and the schedule, did NOT rule on the validity of any individual listing.

III. DEQ Fails to Fully Consider Effect of Natural Mineralization on Water Quality

It is not clear at all from the proposed metals TMDLs that the possibility of natural conditions may not allow for the application of the designated use. Perhaps the stream segments in question should be placed in the "modified" use category. Hecla's comments to DEQ and EPA on the "EPA/DEQ Proposed TMDL for Dissolved Cadmium, Dissolved Lead, and Dissolved Zinc in Surface Waters of the Coeur d'Alene River Basin" discussed in detail the issues of natural background in mineralized areas, appropriate designated

V. Use of the Guidance Documents and Models Is Not Appropriate

The following list is of certain guidance & models used in the sediment TMDL:

- RUSLE
- WATSED
- McGreer Model
- RASI
- Washington Forest Practices Board Manual
- WATBAL Model

None of the above have any legal effect at all in Idaho and yet they are being utilized by DEQ in a regulatory context to justify the control of legal activities by the regulated community. For example, the sediment TMDL, with all of its uncertainty and reliance on materials not subjected to APA requirements, will be used as an excuse to close roads and restrict legal activities such as logging. As stated in the above comments, DEQ has ignored specific regulations relating to sediment while deferring to nonregulatory mechanisms. For example, the draft TMDL on page 42 states "Sedimentation rates in excess of 100% of natural sedimentation are likely sufficiently high to exceed water quality standards (Washington Forest Practices Board, 1995)." On this same page, "The percentage above background for each sub-basin ranges from 47 to 203%." This is incredible when the admitted overestimation due to the conservative nature of sediment TMDL is 231% and, in reality, may be even more (see above comment on MOS)! To further blur the necessity of a "sediment" TMDL, the following statement is made on page 43:

The root parameter of concern for the North Fork is hydrologic modification.
(emphasis added)

This is disturbing because under the "Executive Summary" on page 1 of the draft TMDL, the following statement is made:

Habitat and flow alteration are not impacts amenable to development of TMDL allocations. (emphasis added)

It appears that a "problem" with sedimentation was developed to address the real problem of hydrologic modification to justify a TMDL! This is not appropriate.

Miscellaneous Comments

1. While we do not believe that internal guidance and policy are legal to use in a TMDL when these references exceed legal authority, DEQ nonetheless has both policy and guidance concerning TMDLs. From a brief review of these documents, it is clear these internal DEQ documents were not followed and we are curious as to why they were not followed if they are intended to direct DEQ's TMDL actions.
2. The draft sub-basin assessment (the assessment) on page 2 at 2.1.1.2 uses gauging station data through 1997. Since the TMDL is not "due" until 2003, additional years should be added to the analysis since this information is available.
3. On page 5 of the assessment, second paragraph, what are "multiple resource inputs" and what is the source of this term? We are familiar with the term "multiple use" which is the term intended to direct Forest Service activities.
4. Same page as above comment, we are not familiar with the "Raymond-Carlisle Mine". We know this mine as the "Ray Jefferson" and the "Carlisle".
5. Same page as above comment, last paragraph – fish surveys from over 7 years ago should not be considered in making today's determinations.
6. Page 8 of the assessment, second paragraph – it is stated that "...unlisted segments...are probably contributing to the water quality limitations of the listed segments. Remedial actions will be necessary in the watersheds of these unlisted tributaries..." As stated in comments above, there is no legal authority for this course of action. It is also quite of leap from "probably" a problem to "remedial actions will be necessary".
7. Beginning on page 8 of the assessment, all regulatory citations must be updated.
8. Page 9 of the assessment, first regulatory quote – the quote is not correct as described in above comments.
9. Page 9, Table 3 – the "turbidity" criteria should be clarified that this is for mixing zones below point sources (IDAPA 58.01.02-250.02.d.).
10. Page 10 of the assessment, last sentence under 2.3.1. – the statement is made that "Roads may yield sediment directly from their surfaces or bed through mass wasting or the location of the road may cause the adjacent stream to begin bank cutting." (emphasis added) The TMDL process demands that real world evidence of a problem exists (and indeed the sediment regulations require this) through monitoring and actual

surveillance. Actual monitoring is almost non-existent in both TMDLs. While the use of true reference streams and conditions may be allowed in certain circumstances, there is adequate time to conduct appropriate monitoring prior to the actual deadline of the TMDL in 2003.

11. Page 12 of the assessment, first sentence -- "Some water column chemistry data was collected in water years 1993 and 1994." As stated in prior comments, there is adequate time to conduct current monitoring.
12. Page 12 of the assessment, first paragraph -- there is a disconnect between sentences and we cannot tell what is meant here (i.e. "...Creek confluences. suspended solids, indicate...")
13. Page 13 of the assessment, Figure 4 -- there is a legend for "Mine and mill type". The map should clarify, with different legends, which mines had mills (most did not).
14. Page 14 of the assessment, Table 6 -- the 90th percentile hardness is 20. It should be noted that hardness, for the purposes of criteria calculation, cannot be below 25.
15. Page 15 of the assessment -- for the "measured and calculated average metal loads" in Table 7, while we are sure there is method to derive these values, it is not clear how this was done. Is this the total maximum daily load for the stream at these flow tiers and if so, is this load for the entire volume of the stream?

We assume the "n=" is number of samples. If this is correct, then seasonal variability is not addressed. Seasonal variability is not optional under a TMDL -- it is mandated. Once again, there is sufficient time to collect necessary monitoring data prior to the 2003 official "deadline" of the TMDLs.

At these flow tiers, are the criteria exceeded at each tier? If not, then an allocation should only apply for that tier.

16. Page 15, last paragraph -- adit flows are presumed to be "similar to that of the Gem adit". We could not locate any actual monitoring data for all seasons for any of the adits addressed in the draft TMDL. Once again, there is time to collect actual data. While some discharges may exhibit similar characteristics, they also may vary markedly. It is given that the source of adit flow is the infiltration of area precipitation (i.e. if these adits were placed in the desert there would be no flow). Actual flow from any individual adit will depend upon a host of factors such as: extent of mining activity, fracture of the host rock, infiltration area overlying the site, fault zones, storage capacity of the overlying strata, etc. We cannot tell how loads attributable to the identified point sources can be substantiated without actual monitoring data for all seasons.

17. Page 16, Table 8 – it is not clear how the “Weighted Discharge” was calculated. For the listed adits were the flows based exclusively on assumptions from the Gem adit flow? Note: the Gem is a near stream-level adit; most adits are not
18. Page 17, section 2.3.2.2.1.6 – are the “nondiscrete discharges” all “estimated”? There is time to monitor as mentioned numerous times in above comments.
19. Page 17, section 2.3.2.3 – what is “abundant evidence suggesting bedload sediment”? As stated in the above comments, the TMDLs are based almost exclusively on nonregulatory guidance and models rather than on actual monitoring. Further, what do “historical descriptions” do for the science of the current situation? Has there been a study of current bedload to determine what percentage is due to past practices? This is an extremely important consideration since current activities inappropriately will be blamed for past legal activities.
20. Page 17, section 2.3.2.3.1 – there should be some discussion concerning the limitations of the “riffle armor stability index (RASI)”. For example, it appears the RASI just involves measurements instream. Can a RASI score be used in reference situations where influences outside the stream channel are present? (i.e. if two streams have similar flows & bank widths but one stream is located in a valley floor 1 mile wide with porous alluvium and the other in a narrow valley with relatively low subsurface porosity?) Does the RASI account for stream gradients and watershed areas above the measurement location (when comparing RASI scores with “reference” streams)? Wouldn’t a RASI score at the same site be different if the one measurement was taken during a drought year and the other where stream flow was above normal (this could be a foot or two difference in stream depth)? These considerations are important since the North Fork RASI scores are being compared to “un-managed streams of the upper St Joe River basin” (page 18). This area should not be termed “un-managed” if fire suppression activities have occurred. Besides, it is recognized that roads do impact stream hydrology and the upper St. Joe has “very few or no roads”. It is not appropriate to compare the St. Joe area with the North Fork. While use of the RASI as an ongoing measure (of exact repeated measurement sites on the same stream) would be useful, a RASI score is only a snapshot in time specific to a location and should not be used to compare dissimilar situations.
21. Page 19, section 2.3.2.3.2 – the limitations of the measurement of “residual pool volume” should be discussed. For example, streams of differing gradient, valley floor width, and subsurface conditions would be expected to have different pool structures. Dissimilar sites should not be compared as “reference conditions”. In addition, if the North Fork has a bedload largely attributable to past practices (which would reduce pool volume), this must not be used as an excuse to limit current activities that do not produce the same effect.
22. Page 21 of the assessment discusses fish population data. The second paragraph states that “The absence of sculpin in the East Fork of Eagle Creek is likely the result of the

presence of heavy metals.” (emphasis added) How were other factors, such as stream gradient and habitat or predators, ruled out? With essentially no studies or data, this is a giant leap.

The last paragraph talks of fish population studies in the 1970's that showed trout decline in both the North Fork and St. Joe rivers. The text states “As a result, Idaho Department of Fish & Game instituted stringent harvest regulations designed to recover trout populations. The St. Joe River trout populations have increased in response to these regulations while the North Fork populations have not.” The assessment then only addresses one potential cause, that of compliance with harvest regulations which is alleged to be superior in the North Fork. Then the draft assessment concludes that lower trout densities in the North Fork are due to “stream bed instability”. The following are just a few compounding factors not addressed:

Harvest regulations are not the same in the North Fork & St. Joe – they are much more restrictive in the St. Joe and have been for some time.

- Are comparisons of fish densities made in areas of similar accessibility?
- Are comparisons made in areas of similar resident densities?
- Most of the St. Joe is catch-and-release; fishermen who favor this would frequent the St. Joe more than the North Fork.
- What is the percentage of adults vs. children fishing the two areas? Children do not require a license and are not as easily accounted for in the statistics. How many children reside in the different areas being compared?
- Do both rivers have the same proportions of different trout that are predators on one another?
- Wouldn't an area with less restrictive harvest regulations exhibit a higher proportion of spawning adult fish?

Clearly, fish population differences require a much more thorough study of all factors than is given in the draft TMDL. There is sufficient time to address these issues before 2003.

23. Tables 14a-g of the assessment give the same “Projected CWE Score” for all watersheds even though individual watershed factors vary significantly. The text must give a full explanation of the CWE and why this is so.

What percent of the roads in these tables is open to traffic? How many of these road miles are overgrown with vegetation and not used? Why wouldn't different loads be

assigned to these different conditions?

24. Beginning on page 31, the assessment discusses models for sediment transport. Appendix B discusses the over estimation of these conservative models. Several problems are apparent:

We cannot comment on the applicability of "five reference watersheds" (page 32, section 2.3.2.5.1.2.2.) without knowing exactly what these reference watersheds are and where they are located. What are they? Why doesn't the Forest Service know the "road failures" in the North Fork?

For agricultural sources, there are clearly areas of such use in the North Fork that have no surface sediment route to the river and should be assigned a "zero" in reality but are assigned from 0.03-0.06 tons/acre/year. Sites visits could verify this and there is time to do this before 2003.

It is hard to understand how wildfire burn areas are expected to yield almost 6 times LESS sediment per year than equivalent areas of conifer forest (Table 15, page 32). How can this be? It also is unfair to target human activities producing sediment while ignoring fire suppression activities by humans. How many acres in the North Fork would have burned under a "let burn policy"? What resultant sediment loads are avoided due to human activities to suppress these fires? How many acres are saved from burning due to road access? This should be netted out of alleged contributions due to roads.

"Road encroachment" is a model "based on a set cross-section of 56 feet" that is "a weighted mean channel width of many channels" (page 33). How many watersheds in the North Fork system do not fit this model? Appendix B also uses a standard 50 foot distance to the stream to determine "road encroachment", regardless of the actual real world setting. At the most, the 50 foot distance (based on GIS map resolution and not a scientific analysis of true sediment loading) should be used as an office screening tool with site visits to verify how many miles truly qualify as sediment "road encroachment" sources. It is likely that the conservative nature of this approach is considerably more than the 20% assigned in Table 1 of Appendix B.

It is not appropriate to annualize the results of episodic events which occur only once every 10-15 years (road failure) as commented previously. Is there any evidence that a 10 or 15 year event has resulted in road failures? If so, how many and what is the extent of the failure(s)?

The above shortcomings could be addressed by actual field surveys. There is time to do this prior to 2003.

25. The issue of "Pollution Control" is addressed on pages 48 and 49 of the assessment. While the "primary land manager of the North Fork watershed is the U.S. Forest

May 23, 2001

William Booth
Hecla Mining Company
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Coeur d'Alene ID 83815-8788

Dear Bill:

Thank you for the comment provided by Hecla Mining Company on the North Fork Coeur d'Alene River Sub-basin Assessment and Total Maximum Daily Loads (TMDLs). A considerable amount of comment was received on these documents. Comments raising legal issues comprised some of this comment. Response to the comment and revision of the Sub-basin Assessment (SBA) and the TMDLs has taken some time since the close of comment on January 22, 2001.

The comments made by Hecla as we understood them and our responses follow. If a revision was made to the documents this is noted. A responsiveness summary of all the comment will be submitted with the assessment and TMDLs. If you wish to review the comments of others and our response and actions taken, this document should be consulted.

Comment 1: The TMDLs fail to comply with applicable federal and state laws & regulations.

Response 1: DEQ believes the TMDL meets the requirements of state and federal law. The TMDL contains all those elements required by Idaho Code section 39-3611, CWA section 303d and 40 CFR 130.7. A similar metals TMDL was approved by EPA for the South Fork of the CDA and similar sediment TMDLs, using the same model as was used for the North Fork TMDL, were approved for Wolf Lodge, Cougar, Kidd, Mica and Latour Creeks. DEQ believes the TMDL meets the requirements of state and federal law.

Comment 1a: Neither of the proposed TMDLs are required under CWA section 303(d)(1) because TMDLs are only required for waters impaired by point sources operating under technology based effluent limitations. The proposed TMDLs, if necessary at all are clearly intended to be TMDLs under CWA section 303(d)(3).

Response 1a: DEQ disagrees that TMDLs are only required for waters impaired by point sources. TMDLs are a part of the water quality-based approach under section 303 of the Clean Water Act that is clearly not limited to point sources. See *Pronsolino v. Browner*, 91 F Supp 1337 (ND CA 2000) and Response to Comments regarding the TMDL for dissolved cadmium, lead and zinc in the CDA River Basin at 57 to 60. In addition, Idaho law clearly requires TMDLs to address both point and nonpoint sources of pollution. Idaho Code sections 39-3602(27) (defines TMDL to include load allocations for nonpoint sources); 39-3611 (directs development of TMDLs to control point and nonpoint sources of pollution). The segments of the North Fork Coeur d'Alene River are listed on both the 1996 and 1998 Idaho 303(d) water quality limited segments list. The sub-basin assessment for the North Fork confirmed that the waters at issue do not meet state water quality standards. Therefore, TMDLs are required under CWA section 303(d).

Comment 1b: Point source "impacts" have not been shown to be a "problem" in either TMDL and since 303d is limited to point sources, no TMDL is required.

Response 1b: DEQ disagrees that 303d only requires TMDLs for point sources. See response to comment 1a. Moreover, the SBA clearly indicates that adits discharges (discrete point sources) are well above 25% of the metals loads under the lowest discharge conditions. Some of these percentages approach 50% (page 16 SBA). These data demonstrate that the adit discharges are a significant part of the metals standards exceedence problem.

Comment 1c: Both DEQ and EPA have failed to comply with the CWA mandate of Section 304(a)(2)(D).

Response 1c: DEQ is not mandated to take any action pursuant to 304(a)(2)(D). EPA, however, did publish information (December 28, 1978 Federal Register) that all pollutants are suitable for maximum daily load measurement and correlation with the achievement of water quality objectives.

Comment 1d: DEQ cannot ignore the APA process.

Response 1d: TMDLs are plans for the restoration of water bodies to the level of the water quality standards. Idaho Code section 39-3602 ("Total maximum daily load (TMDL) means a plan for a water body not fully supporting designated beneficial uses...") TMDLs do not have the force and effect of law and are not required to follow the APA rule-making process.

Idaho Code section 39-3611 addresses the development of TMDLs and requires TMDLs be developed in accordance with those sections of law that provide for involvement of BAGs and WAGs, and as required by the federal Clean Water Act. There is no requirement in this section that the TMDL be developed as a rule.

Idaho Code section 39-3612, on the other hand, addresses the integration of TMDLs, once completed, with other water quality related programs and provides that this integration is subject to the provisions of the Idaho Administrative Procedures Act. Thus, to the extent required by the IDAPA, DEQ, and other designated agencies, must follow the IDAPA provisions when TMDLs are implemented and enforced under applicable state programs.

Given the scope of the TMDL program and requirements of the court-approved schedule for development of TMDLs, it is clear the IDAPA rulemaking provisions are not applicable. The schedule for development of TMDLs in Idaho is the product of federal court litigation. According to the TMDL schedule, from 1997 to 1999, DEQ was to develop 529 TMDLs. Under the IDAPA, rules must be approved by the legislature before they become effective. Because of this and other rulemaking requirements, rules typically take almost a year to promulgate. Idaho Code section 39-3601 et seq was enacted in response to this federal TMDL litigation and the legislature certainly never intended DEQ to attempt to promulgate hundreds of required TMDLs as rules.

The federal APA does not require EPA adopt TMDLs as rules. Moreover, given the short deadlines in section 303d of the CWA, including the requirement that TMDLs be developed within 30 days of EPA disapproval of a state TMDL, the CWA clearly does not envision or require TMDLs be developed as rules.

Comment 1e: Draft TMDL circumvents APA process by adding a pollutant and a segment for that pollutant.

Response 1e: The TMDL is not a rule. See response to comment 1d. Hecla is probably referring to the fact that Beaver Creek was demonstrated by monitoring to exceed cadmium, lead and zinc standards. However, Beaver Creek is currently listed for sediment. The policy of DEQ and EPA is to address all pollutants of concern for 303(d) listed water bodies. The metals were found to be pollutant of concern because the levels violate state water quality standards. DEQ will go through the required process,

William Booth
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including public notice and participation, to list this water body. Prior to listing, the TMDL developed will not be required to be submitted to or reviewed by EPA.

Public comment of sixty days was allowed in the current SBA and TMDL process. It is clear from the data that metals standards are exceeded. Public comment is then being taken and responded to at this time. Since the data is clear, DEQ has chosen to be thorough and prepare a TMDL for cadmium. Lead and zinc for Beaver Creek.

Action taken: DEQ will defer the Beaver Creek metals TMDL until the stream is listed for cadmium, lead and zinc.

Comment 1f: TMDLs are incomplete, thus do not constitute a TMDL as required by regulation; not all point and nonpoint sources identified.

Response 1f: To our knowledge all point sources of metals have been identified. The nonpoint sources have been identified to the state of the knowledge in these watersheds for both metals and sediment.

Comment 1g: Adoption by Idaho of TMDLs must follow the requirements of Idaho's APA for formal rule making.

Response 1g: See the response to comment 1d.

Comment 2: Failure to comply with Idaho regulations pertaining to sediments. DEQ used modeling and guidance not in IDAPA 58:01.02-200.08. All parts of subsection 350 are not met.

Response 2: Section 200.08 of the Idaho Water Quality Standards prohibits sediment in quantities which impair designated beneficial uses. DEQ acted in compliance with this section of the water quality standards by using in-stream beneficial use reconnaissance data to demonstrate that the beneficial use was impaired and that sediment was filling pools required by the beneficial use. The modeling was used to estimate the amount of sediment yielded to the watershed. Section 350 of the Water Quality Standards controls enforcement of the standards and the evaluation and modification of best management practices with respect to nonpoint sources of pollution. Section 350.01.a ("Violations of water quality standards which occur in spite of implementation of best management practices will not be subject to enforcement action."); Section 350.01.b ("[F]ailure to meet general or specific water quality criteria, or failure to fully protect a beneficial use, shall not be considered a violation of the water quality standards for the purpose of enforcement."); Section 350.02 (provides that if BMPs not met, enforcement actions can be pursued when narrative or numeric standards are violated). Section 350 is not relevant to DEQ's determination of whether water quality meets the requirements of 200.08 or DEQ's development of a TMDL. Section 350, however, will be relevant to DEQ's implementation of the TMDL because it addresses the program DEQ and other designated agencies will use to make those reductions from nonpoint sources necessary to meet Water Quality Standards.

Comment 3: DEQ failed to fully consider the effect of natural mineralization.

Response 3: The issue of natural mineralization was addressed in the Coeur d'Alene Basin Metals TMDL and in the Natural Resource Damage Assessment process. Technical analysis of forty sites in the mineralized zone of the Silver Valley demonstrate that metals background in water is somewhat higher than non-mineralized zones, but well below the metals standards. A further discussion of this point can be found on page 35 of the Coeur d'Alene Basin Metals TMDL response to comments and in the Technical Support Document. DEQ assumes that this data is applicable to the mineralized zone of the North Fork Coeur d'Alene watershed. A further discussion of natural background metals concentrations will be placed in the SBA.

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Comment 4: The proposed "margin of safety" is highly inappropriate.

Response 4: The rationale for the margin of safety (MOS) is part of the TMDLs. For metals the MOS is based on the precision of stream discharge measurements and the analytical precision of metals measurements. The sediment TMDL incorporates the MOS into the conservative goal of 50% above background sediment yields. Below this level of sediment yield the referenced studies indicate that water quality impairment is not observed.

Comment 5: Use of models and guidance not appropriate in a regulatory context.

Response 5: See response to comment 1d. The use of models and guidance to interpret water quality standards and develop TMDLs is clearly authorized by the CWA and state law. The Idaho APA allows agencies to develop and use written statements which pertain to an interpretation of a rule or to the compliance with a rule without going through formal rulemaking. Idaho Code section 67-5201(19).

Miscellaneous Comments:

Comment: DEQ internal guidance documents not followed.

Response: The comment does not identify which internal DEQ guidance document(s) were not followed. In the opinion of the technical staff and internal reviewers, internal DEQ guidance was followed.

Comment: The hydrograph in section 2.1.1.2 is developed for data through 1997. Why not through 1999 or 2003?

Response: This hydrograph was updated through water year 2000 data and will be for the final SBA.

Comment: Define or explain the term "multiple resource outputs" on page 5.

Response: Multiple resource outputs refers to the USFS multiple use policy under which federal forest lands which make up most of the watershed are managed for timber, recreation, wildlife, watershed and other resource outputs. The meaning of multiple resource outputs will be clarified in the text of the SBA.

Comment: Hecla not familiar with the Raymond -Carlisle; mines known to Hecla as the Ray Jefferson and the Carlisle, page 5.

Response: The SBA is in error on the nomenclature of the Ray Jefferson Mill site. The Carlisle Mine is the name that the remedial investigation documents ascribe to the adit. DEQ staff consulted with Hecla staff and corrected the errors in naming in the SBA.

Comment: Fish surveys from seven years ago should not be used to make today's determinations, page 5.

Response: The SBA is required to use the most current data and lack of information is not an excuse to delay TMDL development. These surveys are the most current data on many streams of the North Fork. The Idaho Department of Fish & Game advises DEQ that they are most reflective of the fish populations of the North Fork Coeur d'Alene River watershed.

Comment: It is stated unlisted water bodies contribute to listed water bodies and actions must be taken on the unlisted water bodies, page 8 The opinion is expressed that no legal authority exists to do this.

Response: Under both federal and state law, TMDLs must address all sources of a pollutant to a listed water body. Idaho Code section 39-3611 specifically directs DEQ to identify all sources within the

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watershed that are contributing pollutants to the listed water body. In addition, CWA 303(d) requires that TMDLs be established at levels necessary to implement applicable water quality standards. Absent controls

on upstream sources, DEQ would lack the assurance that the TMDL for downstream waters would result in the attainment of water quality standards. In the case of the North Fork Coeur d'Alene River, the segment from Yellow Dog Creek to the mouth of the river is listed for sediment. Sediment sources exist throughout the watershed above this segment as well as in this segment. This fact of geography and the fact that sediment is a pollutant natural to all watersheds requires that the North Fork Coeur d'Alene River TMDL address all water courses of the watershed. The point that a TMDL for sediment of all stream courses was further clarified in the SBA and sediment TMDL.

Comment: On page 8 all regulatory citations should be updated, P.8 onward.

Response: This was an oversight of the change of citations as IDEQ became a Department. The corrections were made in the SBA.

Comment: On page 9 quote of sediment narrative standard is not correct.

Response: This is correct. There are minor errors in the quote of the standard. These errors were corrected.

Comment: Turbidity criteria should be clarified as below mixing zones of point sources, page 9.

Response: The standard is applicable below mixing zones, however it is based on salmomid sight feeding requirements. Since the standard has this technical basis it is often used to interpret the narrative sediment standards as a deleterious impact on the beneficial use. The clarification concerning the mixing zone was supplied as a footnote as well as clarification that this benchmark can be used to interpret the narrative sediment standard.

Comment: No direct monitoring of sediment inputs, yet time to complete this by 2003, page 10.

Response: Direct quantification of sediment is a most expensive and time consuming undertaking. If carried out correctly, sediment monitoring should proceed through seven water years. The court schedule did not provide for a seven year monitoring time frame nor does the state have the budget to monitor sediment on the numerous water bodies listed for sediment. The modeling approach was taken for this reason. These points were incorporated into the SBA at section 2.3.2.3.

Comment: Disconnect between sentences, page 12. The disconnect was not found.

Response: The disconnected sentences were not found.

Comment: Legend for map on page 13 should clarify mines and mills.

Response: DEQ agrees that this would give the figure greater utility. The figure will be re-plotted to mark the mills.

Comment: The 90th percentile hardness is 20 it should be 25, page 14; Table 6.

Response: The 90th percentile of the hardness data set for Beaver Creek is 20 mg/L calcium carbonate. The metals standards as applied in the TMDL are cut off at a hardness of 25. There is no application of a standard below this level.

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Comment: Is table 7 (page 15) the TMDL for the stream at these flow tiers?

Response: Table 7 provides in-stream measurement of the metal loads in the four flow tiers for Beaver and East Fork Eagle Creeks. It is not the loading capacity, it is the current measured metals loads.

Comment: Seasonal variability is not addressed by the TMDL. (page 15 table 7).

Response: Table 7 divides the metals loads measured in-stream into the various flow tiers based on the discharge when the measurement was taken. Table 7 specifically addresses seasonal variability. Table 7 is not however the TMDL (see comment response above).

Comment: At these tiers are the criteria exceeded at each tier? (page 15, Table 7)

Response: At these tiers the metals standards are exceeded in every case.

Comment: No actual data for the adits addressed in the TMDL; there is time to collect this data before 2003, page 15.

Response: The concentration data for the adit discharges is actual data from the EPA remedial investigation database. The discharges come from this database as well. They are weighted for annual discharge based on a synthetic hydrograph developed from the Gem adit discharge record. The data base source should have been cited in the text. The adit discharge database source is cited in the SBA text page 15.

Comment: It is not clear how the weighted discharge is calculated, page 16, Table 8.

Response: The procedure was not sufficiently outlined in Appendix A. This change was made to Appendix A and referenced on page 15-16 of the SBA.

Comment: Are non-discrete discharges all monitored; there is time to monitor these discharges, page 17 section 2.3.2.2.1.6.

Response: The non-discrete sources are based on the best professional judgement of USFS, USGS and DEQ staff. Monitoring these sources would again constitute a time consuming and expensive undertaking which would not be completed prior to the 2003 deadline.

Comment: Explain "abundant evidence" page 17 section 2.3.2.3. It is again noted that bed load is based on modeling not on monitoring. Is there any measure of current bed load not past. Important because current activities blamed for past activities.

Response: The abundant evidence is provided in the following pages in terms of RASI and residual pool volume data. These data are supported by the model results.

Comment: Some discussion of the limitations of RASI should be provided, page 17 section 2.3.2.3.1.

Response: RASI is simply a method to estimate how much of the bed load of the stream is in motion during the two-year flow event. This method is explained in the text. Its limitations are based solely on selection of point bars and measurements of particle sizes. These limitations are self-evident.

Comment: Limitations of residual pool volume should be discussed., page 19 section 2.3.2.3.2.

Response: The limitations of residual pool volume measurement are the number of stream feet assessed. DEQ uses 20 times bank full width as explained in the text, because hydrologic theory holds that a stream

repeats itself in this reach length. The other limitation is measurement of the pool parameters. These limitations are again self-evident.

Comment: Absence of sculpins indicates the presence of heavy metals. How are other factors ruled out?

Response: It is a common observation in the Natural Resource Damage Assessment documents, the beneficial use reconnaissance data, and the site specific criteria preparatory inventories that Sculpin are not found downstream of metals sources. They are found in streams where all other factors are present except metals. The interaction is likely not a column water quality factor because the site-specific studies have found sculpin relatively resistant to metals in the water column. The SBA text was augmented to cover the points stated above.

Comment: Many other factors listed could explain the difference in fish population densities between St. Joe and North Fork Coeur d'Alene River, there is time to explore these.

Response: The two factors believed by Fish & Game personnel that affect fish populations on a watershed wide basis are fish harvest and habitat changes. In this case the habitat change that the data points to is pool filling by sediment. Fish & Game management personnel are of the opinion that fishing harvest regulations are better adhered to the North Fork than in the St. Joe. This opinion points to the sedimentation. An SBA of the St. Joe River above the St. Maries River confluence has been completed by DEQ using a similar approach. This assessment found generally high fish densities, sufficient residual pool volume and the limited RASI data indicates more stable streambed. This result bolsters the argument that sediment filling of pools in the North Fork Coeur d'Alene River is effecting fish populations adversely. Language was added describing the St. Joe River findings at page 21 of the SBA.

Comment: CWE method should be completely explained. What information is there on the condition of roads.

Response: The CWE method is documented in full reports by IDL whose process it is. This report should have been referenced. It is now referenced in the SBA.

Comment: Problems are apparent with sediment model. 1) Cannot comment on applicability of the five reference watersheds; 2) Why doesn't the Forest Service know about failures? 3) Agricultural areas have no delivery route to the North Fork and should be zero. 4) It is hard to understand why burned areas have six times less sediment. 5) Road encroachment based on mean channel width; also fifty feet from the stream is not actual proof of stream in floodplain. 6) Not appropriate to annualize events. 7) above shortcomings should be remedied with field surveys.

Response: 1) The five reference belt rock watersheds were assessed in the 17010303 SBA. These watershed that are listed are all on a similar Belt geology and a predominantly forested watersheds. Two, Wolf Lodge and Cedar Creeks are across the ridge from the North Fork watershed. 2) These streams were assessed by CWE and constituted the best means to estimate the failures and CWE scores in the North Fork. The fact is that the Panhandle National Forests have not developed a road failure survey. As the reference watersheds indicate road failures are not a large factor on forested Belt terrain. This may be why the Forest Service has not invested in such a survey. 3) Agricultural lands are located next to the river in the floodplain. Close inspection will find micro-drainages to the river. The RUSLE model assumes stream delivery when agricultural lands are adjacent to a water body. 4) Areas that were heavily burned were not assessed to yield six times less sediment. Rather these values are a correction bringing acreage that is treated as fully stocked up to the level of non-stocked. The rationale is that large double burn areas yield for many years loading sediment to streams. Latour Creek is an example of a stream with this phenomena. The adjustment was deemed necessary by the sediment TAG advising DEQ as the best means to take such cases into account by the model. 5) As demonstrated in Appendix B the mean channel width is developed

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from a very large data set. The sediment TAG attempted to develop this value continuously using a GIS approach and relations between stream bank full width and watershed size. This approach is at the edge of GIS capability (Students at University of Washington are working on software to do this). For this reason DEQ defaulted to the mean bank full width approach. The 50-meter estimation was a parameter agreed upon by the sediment TAG. It is an assumption, which will be verified in any road removal implementation along with a host of other considerations. 6) It may not be scientifically correct, however TMDL are stated in mass per unit time. Thus annualization is necessary for a pollutant that loads episodically. 7) The funding and time is not available to study the many issues brought up. These will be studied on a site by site basis as the plan to implement the TMDL is executed. These seven points were clarified further in the SBA and TMDL texts.

Comment: Three stream's bank and bed owner is state of Idaho. If sediment is a problem, DEQ must address the problem by sediment regulations.

Response: The format by which any water quality limitation is addressed is clearly outlined in sections 303(d) and 303(e) CWA. This is to assess the problem, create goals and allocation of the pollutant of concern and an implementation plan to meet these goals and allocations. This TMDL process is the process the state is following to comply with the CWA and a judicial order.

Comment: First table of Appendix A is not comprehensive; map sites are missing, most dates are missing, an explanation of acronyms and units is missing.

Response: DEQ agrees with this assessment of the table supplied by the US Geological Survey. The table was revised.

Comment: Gem discharge data does not show units.

Response: The units are gallons per minute. This change was made in the table as part of the revision to better clarify how the synthetic hydrograph for the adits was developed.

Comment: Method of USGS measurement at Harrison.

Response: USGS was measuring suspended and bed load at Harrison. However, more pertinent data is in the feasibility study for the North Fork at Enaville. This information was from bed load and suspended load collection. The North Fork Coeur d'Alene River at Enaville data was used in the revised text. The feasibility study and the USGS method from the RI/FS documents were referenced.

Thank you for the comments that were developed on the North Fork Coeur d'Alene River Sub-basin Assessment and TMDLs. If you have questions concerning our responses or the actions taken, please contact me at 208-769-1422.

Sincerely,

Geoffrey W. Harvey
Watershed Coordinator